

Notice of Allowability

Application No.

09/675,525

Applicant(s)

BARRETT ET AL.

Examiner

Art Unit

Gerald G. Leffers Jr., PhD

1636

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the After-Final amendment of 3/25/2005.
2. ☒ The allowed claim(s) is/are 1,4-33,35-38,40,42-45, 47,49-54 and 127.
3. ☒ The drawings filed on 22 January 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

Receipt is acknowledged of an After-Final amendment submitted on 3/25/2005, along with a 1-month extension of time for response. In the response of 3/25/2004, several claims were cancelled (claims 2-3, 34, 39, 41, 55-126) and several claims were amended (claims 1, 5-33, 35-38, 40-47, 49-54 & 127). Previously withdrawn claims that were directed to nonelected species and which are still pending are hereby REJOINED with the elected claims (i.e. rejoined claims 4, 10, 13-21, 43, & 51-53).

An extension of time under 37 CFR 1.136(a) is required in order to make an examiner's amendment that places this application in condition for allowance. During a telephone conversation conducted on 4/7/2005, Joe Liebeschuetz requested an extension of time for an additional 1 MONTH(S) and authorized the Director to charge Deposit Account No. 20-1430 the required fee of \$145 for this extension and authorized the following examiner's amendment. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In the claims:

Claim 40. (currently amended) The collection of bacteriophage of claim 127, wherein each of the heterologous nucleic acid tags from the different bacteriophage [are] is an isothermal [tags] tag.

Claim 45. (currently amended) A bacteriophage displaying a compound other than an expressed polypeptide, wherein the bacteriophage and the compound are attached via a linker, and wherein the bacteriophage comprises a heterologous nucleic acid tag that can be decoded to identify a characteristic of the compound and the heterologous nucleic acid tag is a nucleic acid segment other than a segment that encodes for a polypeptide displayed on the bacteriophage.

Claim 46 is cancelled.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance: the prior art does not teach or suggest the recited bacteriophage where the phage displays a compound that is (i) other than an expressed polypeptide as defined in the specification (e.g. page 10, lines 31-32), and (ii) where the bacteriophage comprises a nucleic acid tag that can be decoded to identify a characteristic of the compound and where the heterologous nucleic acid tag does not encode a polypeptide displayed on the bacteriophage. For example, traditional phage display technologies can be considered to display compounds other than expressed polypeptides (e.g. see the rejections of record made over the teachings of U.S. Patent No. 6,777,239 & U.S. 5,766,905 in the 9/29/2004 office action). These traditional approaches to phage display technologies do not teach or suggest, however, the inclusion of a heterologous nucleic acid tag that (i) does not encode a protein displayed on the surface of the bacteriophage, and (ii) which can also be used to decode a characteristic of the displayed compound.

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Screening methodologies that are somewhat more analogous to the invention recited in the allowed claims is taught in two related U.S. patents, U.S. Patent Nos. 5,958,703 & 6,309,842. These patents teach a specialized system for identification of compounds that affect cellular signal transduction pathways and which feature the use of particle supports comprising nucleic acid tags that can be decoded to identify the displayed compound (e.g. Abstract; Figure 1, etc.). However, while these patents do teach that phage display technologies can be used in their methods, phage display is only taught in the context of the display of peptides that are in fact encoded by their corresponding heterologous nucleic acid tags (e.g. column 9, lines 14-27 of the '842 patent). There is no teaching or suggestion in the '703 and '842 patents for phage that display a compound other than an expressed polypeptide and which also comprise a heterologous nucleic acid tag that can be decoded to identify a characteristic of the compound and where the tag does not encode a peptide displayed on the phage.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion


Claims 1, 4-33, 35-38, 40, 42-45, 47, 49-54 & 127 are allowed (now claims 1-48).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gerald G. Leffers Jr., PhD whose telephone number is (571) 272-0772. The examiner can normally be reached on 6:30-4:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Remy Yucel can be reached on (571) 272-0781. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


GERRY LEFFERS
PRIMARY EXAMINER

Gerald G Leffers Jr., PhD
Primary Examiner
Art Unit 1636

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